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## **Balancing Entrepreneurial Need Satisfaction and Passion for Venture Success**

### **Structured Abstract**

**Purpose** – The purpose of this research is to investigate how the satisfaction of entrepreneurs' psychological needs affects venture growth beliefs and perceived financial performance under conditions of harmonious and obsessive passion.

**Design/methodology/approach** – Through the integration of self-determination theory and the dualistic model of passion, a research framework is developed and empirically tested among 255 Latvian SME entrepreneurs, as well as replicated among 205 Russian entrepreneurs, with the utilization of EQS and SPSS software.

**Findings** – We reveal that satisfaction of entrepreneurial psychological needs facilitates the emergence of positive venture growth beliefs, which in turn enhances financial performance. Additionally, harmonious passion positively moderates the link between entrepreneurial need satisfaction and venture growth beliefs, while obsessive passion negatively conditions the relationship of entrepreneurial need satisfaction with perceived financial performance.

**Research limitations/implications** – Caution should be exercised in applying the research findings too broadly, due in part to the cross-sectional design of the study and the self-reported nature of the construct measurements.

**Practical implications** – The results can help entrepreneurs reflect on whether their need satisfaction at work is high enough to productively make venture-related decisions, act upon identified opportunities, and expand their business horizons, as well as encourage them to be more passionate yet balanced in their entrepreneurial efforts.

**Originality/value** – Scant research attention has been devoted to the examination of how satisfaction of psychological needs affects entrepreneurial attitudes, beliefs, and actions, and in turn, firm performance. This research responds to a call for more studies on cognitive and behavioral entrepreneurship.

## Introduction

Extensive research has examined drivers of entrepreneurial venture growth and performance outcomes, including personality and individual characteristics (Lee, 2019; Navis and Ozbek, 2016), entrepreneurial orientation (Dai Prá Martens *et al.*, 2016; Kropp *et al.*, 2008), opportunity recognition and creation (Baron, 2007; Maran *et al.*, 2021), and entrepreneurial capabilities (Gupta *et al.*, 2021; Van Gelderen *et al.*, 2015). While studies have advanced understanding of how entrepreneurs achieve success, less attention is devoted to motivational foundations that shape performance-related outcomes. Indeed, the role of satisfying basic psychological needs—autonomy, competence, and relatedness, as per self-determination theory (SDT) (Deci and Ryan, 2000)—in shaping entrepreneurial outcomes is underexplored.

Need satisfaction is key to predicting expectations and performance through its impact on cognition and behavior (Kirkley, 2016). It unveils motives behind entrepreneurs' actions (Murnieks *et al.*, 2019), informing strategies to help their well-being, decision-making, and success. However, the limited available studies reveal mixed findings: some report positive effects of need satisfaction on outcomes such as well-being and job satisfaction (Gagné and Deci, 2005; Shir *et al.*, 2019), while others reveal outcomes contingent on external incentives (Cerasoli *et al.*, 2016) or autonomous actions (Schjoedt, 2009). Since research has primarily examined psychological need satisfaction in relation to entrepreneurs' well-being and job satisfaction, it offers limited insight into how motivation shapes venture-level cognitions and outcomes. We still lack a clear understanding of the mechanisms through which need satisfaction impacts entrepreneurs' beliefs about their ventures and, ultimately, performance perceptions. This gap is especially consequential because entrepreneurs' venture-related beliefs shape strategic persistence, resource allocation, and opportunity exploitation, among other decisions that are often made under uncertainty and without objective performance feedback. Without a clearer understanding of how need satisfaction informs these beliefs and

perceived performance, theory risks offering incomplete or even misleading guidance, particularly in increasingly uncertain and resource-constrained entrepreneurial contexts. Therefore, addressing this gap is critical for advancing entrepreneurship theory on how motivation cognitively and behaviorally translates into venture success.

Motivational dynamics could be particularly salient in small and medium-sized enterprises (SMEs), where the personal values and drive of entrepreneurs are closely linked to firm outcomes. Unlike large firms, SMEs' prospects depend on the founder's motivations, emotional energy, and ability to manage uncertainty and resource constraints. Deepening understanding of how psychological need satisfaction shapes entrepreneurial behaviors and outcomes would unveil motivational drivers that are central to entrepreneurs' assessments of venture success (Fisher *et al.*, 2014; Klyver *et al.*, 2020). Further, founders occupy key decision-making roles and often operate without the formalized structures and hierarchies typical in larger firms. Entrepreneurs' motivations and beliefs directly shape strategic choices, opportunity evaluation, and day-to-day operations. Under conditions of heightened uncertainty and constraints, founders' psychological need satisfaction plays a pivotal role in shaping how challenges are interpreted and growth prospects are envisioned.

This study examines how entrepreneurial need satisfaction relates to financial performance, applying a psychological perspective to entrepreneurial ventures (Shir and Ryff, 2022; Stephan, 2018). In doing so, we respond to a clarion call for more research on the interplay of cognitive, emotional, and behavioral elements (Newman *et al.*, 2021; Pryor *et al.*, 2016) underpinning successful entrepreneurship. The study proposes that entrepreneurial need satisfaction creates positive venture growth beliefs and facilitates superior financial performance. Such growth beliefs refer to perceptions of a venture's future development stemming from current entrepreneurial actions. While short-term financial performance is a key externally imposed (extrinsically motivated) outcome for the entrepreneur, venture

growth beliefs convey a more natural (intrinsically motivated) venture-level requirement (cf. Deci and Ryan, 2000). The desire for short-term financial gains is driven by external market pressures or investor expectations. In contrast, belief in the venture's growth originates within the entrepreneur and is a fundamental internal foundation for the firm's development.

Studying boundary conditions for the outcomes of entrepreneurial need satisfaction can enhance understanding of the psychological factors that shape their experiences (Van den Broeck *et al.*, 2016). Entrepreneurs rarely operate in isolation, and their motivations and performance outcomes are often shaped by contextualized emotional factors such as passion, stress, and the like. Indeed, we posit that entrepreneurial passion—defined as a strong inclination toward entrepreneurial activities that people like, find important, and invest their time and energy in (Vallerand *et al.*, 2003)—has an additional impact on entrepreneurial actions and the performance consequences of psychological need satisfaction.

Recent work highlights that the quality of passion, whether harmonious or obsessive, plays a key role in determining its motivational and behavioral outcomes (Moeller, 2025). We adopt the dualistic model of passion (Vallerand *et al.*, 2003) rather than passion for activity domains (e.g., founding, developing) (Cardon *et al.*, 2013), as our model focuses on how passion regulates the motivational pathway from need satisfaction to venture outcomes under SME uncertainty. Based on the literature and field interviews with entrepreneurs, we distinguish between *harmonious passion*, which results from an autonomous internalization of the activity into the person's identity, and *obsessive passion*, which results from a controlled internalization of the activity into one's identity (Thorgren and Wincent, 2015). While the importance of positive and negative affect in entrepreneurship is known (McSweeney *et al.*, 2022; Walsh and Cunningham, 2024), there is a dearth of work on functional and dysfunctional influences of passion. Distinguishing between harmonious and

obsessive passion clarifies when entrepreneurial passion acts as a resource that fuels motivation versus when it becomes a liability that hinders balanced decision-making.

Despite growing interest in entrepreneurial motivation and passion in SMEs (Chen *et al.*, 2022; Laskovaia *et al.*, 2022; Moeller, 2025; Newman *et al.*, 2021; Zhao and Liu, 2023), research rarely examines how psychological need satisfaction translates into venture-level outcomes via cognitive mechanisms or how passion quality conditions this process. Further, little is known about these dynamics in small, developing, and resource-constrained economies, where success depends heavily on the individual. Thus, drawing on the integration of SDT (Deci and Ryan, 2000) and the dualistic model of passion (Vallerand *et al.*, 2003), we investigate how the satisfaction of entrepreneurs' psychological needs affects entrepreneurial venture growth beliefs and perceived financial performance under conditions of both harmonious passion and obsessive passion (Fisher *et al.*, 2018). Our study is based on survey data of 255 Latvian entrepreneurs and a replication study with 205 Russian entrepreneurs, strategically selected to examine whether there is a contrast between entrepreneurial behaviors and outcomes in small and large emerging markets.

Focusing on SMEs in Latvia provides an appropriate empirical setting for the study. SMEs dominate the Latvian economy and are central to innovation, employment, and economic growth. Their resource-constrained and uncertain operating conditions make the entrepreneur's psychological state and passion consequential for firm performance and long-term survival. Understanding need satisfaction and passion within the Latvian SME sector is important, as these mechanisms not only shape firm-level outcomes but also contribute to national economic resilience and societal accord.

This research contributes in two important ways. *First*, it offers new insights to entrepreneurship research on the significance of psychological need satisfaction (Gagné and Deci, 2005; Van den Broeck *et al.*, 2016). Past research has examined how the psychological

need satisfaction of entrepreneurs is related to general well-being outcomes (Shepherd *et al.*, 2023; Shir and Ryff, 2022), whereas this study demonstrates how need satisfaction shapes venture-level cognitions that are directly linked to performance perceptions. By showing that entrepreneurs' need satisfaction at work enhances venture growth beliefs, which in turn support financial performance, we reveal the mediating role of these beliefs in achieving satisfactory financial outcomes. Thus, the study adds to the entrepreneurial cognition and self-determination literature (Autio and Acs, 2010; Shepherd *et al.*, 2007) by identifying venture growth beliefs as the cognitive mechanism linking entrepreneurs' psychological need satisfaction to perceived financial performance (Van den Broeck *et al.*, 2016). Our research is novel in adopting a holistic perspective by conceptualizing this main motivational sequence between psychological aspects and firm outcomes (Storey, 2011; Uy *et al.*, 2017).

*Second*, the study adds to growing work on the role of passion in the entrepreneurial context (Schulte-Holthaus and Kuckertz, 2020; Zhao and Liu, 2023) and the moderating effects of its two antipodal dimensions (Chen *et al.*, 2022; Ho and Pollack, 2014). While scholars have long recognized that entrepreneurial passion is typically fueling entrepreneurs' activities (e.g., Baum *et al.*, 2001; Gielnik *et al.*, 2015), we distinguish positive and negative conditioning effects of harmonious and obsessive passion (Vallerand *et al.*, 2003), respectively, when passion is applied to the psychological processes of self-determined entrepreneurs. We also demonstrate, post-hoc, the moderated mediation effects of harmonious and obsessive passion on the relationship of entrepreneurial need satisfaction with perceived financial performance via venture growth beliefs. In doing so, we introduce new thinking that underpins the roles that these two forms of passion play in serving as important sources of motivation of venture growth beliefs and financial performance.

## Theoretical Foundation

According to SDT (Deci and Ryan, 1985, 2002), people have three psychological needs that are essential for their optimal functioning at work: (1) a need for *autonomy*—the desire to experience ownership of their actions and a sense of volition in their work; (2) a need for *competence*—the desire to feel capable of managing their work and being able to deal with challenges in the work environment; and (3) a need for *relatedness*—the desire to achieve a sense of communion and belongingness with others at work (Deci and Ryan, 2000).

Individuals are intrinsically motivated when they believe their behavior is self-determined as a reflection of the satisfaction of these three fundamental needs (Lee *et al.*, 2003).

The three SDT needs motivate individuals intrinsically when satisfied, fostering self-determined behavior and personal growth (Deci and Ryan, 2000). Unlike other need-related theories, such as McClelland's (1961) acquired needs theory, which emphasizes learned needs (McClelland, 1965), namely achievement, affiliation, and power (Baum *et al.*, 1993), SDT highlights the universal and intrinsic nature of psychological needs. Acquired needs theory has been influential in studying entrepreneurial intent and opportunity recognition (Maran *et al.*, 2021; Segal *et al.*, 2005). Yet by disregarding the role of innate predispositions, it may not fully capture intrinsic and enduring aspects of motivation (Shane *et al.*, 2003; Van den Broeck *et al.*, 2016), limiting its explanatory power in understanding the comprehensive nature of human needs. SDT addresses this issue by framing need satisfaction as a universal motivator of entrepreneurial behaviors and outcomes. It stands out within motivation work (Shane *et al.*, 2003) by presenting criteria for identifying constructs as *basic psychological needs*—seen as crucial conditions that facilitate the manifestation of our innate tendencies toward psychological growth, internalization, and overall well-being (Deci and Ryan, 2000).

Over the years, SDT has been increasingly applied to the entrepreneurship domain to examine how satisfying psychological needs influences behaviors and outcomes, including

creativity, innovation, and venture performance (Lanivich *et al.*, 2021; Shir *et al.*, 2019; Tierney and Farmer, 2002). Applying SDT to SME entrepreneurs is particularly relevant since need satisfaction is not mediated by large teams or rigid hierarchies, but rather is experienced firsthand by founders whose autonomy, competence, and relationships directly influence their firms' outcomes. Entrepreneurs pursue market opportunities and create work environments that yield positive emotional experiences through personal independence and growth (Lewis and Neighbors, 2005). Research suggests that entrepreneurs derive positive emotional experiences from autonomy, competence, and relatedness, which enhance their intrinsic motivation, persistence, and decision-making (Nikolaev *et al.*, 2020). Psychological need satisfaction also fosters the internalization of external values, aligning stakeholder pressures with personal values and enriching entrepreneurial outcomes (Haivas *et al.*, 2014).

However, the link between need satisfaction and outcomes may be influenced by certain affective states (Deci and Ryan, 2000), which can either amplify or hinder these effects. Passionate entrepreneurs are prone to holding attitudes that mark their engagement in entrepreneurial tasks and influence their actions in pursuit of venture-level outcomes (Chen *et al.*, 2022). Recent research (Vallerand and Paquette, 2024) underscores that passion serves as a self-regulatory resource that can foster resilience and persistence under adversity—which is particularly relevant in entrepreneurial contexts marked by high uncertainty and stress. As such, we posit that entrepreneurial passion exerts an extra impact on the motivational process linking need satisfaction to outcomes.

Entrepreneurial passion has been conceptualized along two complementary lines: (a) the dualistic perspective (i.e., two antipodal perspectives: harmonious vs. obsessive passion) that emphasizes the quality of internalization and its consequences for regulation and adaptation (Vallerand, 2010); and (b) the domain perspective that distinguishes passion for inventing, founding, and developing (Cardon *et al.*, 2013), with recent evidence on

differential effects across outcomes (McSweeney *et al.*, 2022). Our study privileges the dualistic view because it aligns tightly with SDT's mechanisms—whether need satisfaction fosters autonomous versus controlled engagement—thus providing a theoretically direct moderator of the needs–beliefs–performance pathway in SMEs.

From an SDT perspective, harmonious and obsessive passion are seen as distinct self-regulatory pathways that affect how need satisfaction is interpreted and enacted, indicating autonomous versus controlled internalization of entrepreneurial activity into the self. Thus, passion functions as a lens through which psychological need satisfaction is internalized and enacted in entrepreneurial behavior.

Harmonious passion acts as a motivational force to engage freely in the focal activity and in harmony with other elements of that person's life. By contrast, obsessive passion, compels them to engage in the activity, causes a loss of reason, and clashes with other aspects in the person's life (Vallerand *et al.*, 2003). While both types embody emotional intensity (Warnick *et al.*, 2018), the difference lies in the psychological experiences and outcomes associated with them. Harmonious passion is linked to positive outcomes, such as improved well-being, determination, and adaptive coping, as it reflects a genuine interest in the activity that enriches one's life (Mageau *et al.*, 2009). Obsessive passion is associated with negative outcomes, such as burnout, conflict, and compulsive behavior, as it reflects internal pressure to engage in the activity that can undermine other areas of life (Forest *et al.*, 2011). Based on the type of passion internalized, entrepreneurs are expected to differ in the degree to which they regulate feelings and emotions to cope with work challenges (Cardon *et al.*, 2013; Moeller, 2025). We thus argue that the effects of need satisfaction on venture beliefs and financial performance depend on the type of passion driving attitudes and behaviors.

## **Hypotheses Development**

By integrating SDT (Deci and Ryan, 2000) and the dualistic model of passion (Vallerand *et al.*, 2003), the study examines the critical roles that harmonious and obsessive passion play in conditioning effects of entrepreneurial need satisfaction on venture-related beliefs and performance. The research model (see Figure 1) is based on the logical sequence of events (Siguaw *et al.*, 1994), where having satisfied their psychological needs, entrepreneurs develop positive beliefs about their venture, and the development of such beliefs exerts a positive influence on perceived financial performance. We thus follow a tradition of work that theorizes spillovers of individual-level psychological processes and cognitive perceptions to the firm level (Baron and Tang, 2009; Chaston and Sadler-Smith, 2011; Klaukien *et al.*, 2013). Spillovers are especially visible in SMEs, where the founder's beliefs, emotions, and behaviors are tightly joined with firm performance. The lack of bureaucratic buffers in small firms means that entrepreneurs' intrinsic motivation and passion can cascade into positive or negative outcomes for the venture. Harmonious and obsessive passion are expected to affect the spillover of psychological need satisfaction to firm-level outcomes (Pollack *et al.*, 2020).

**Figure 1 here**

### ***The role of entrepreneurial need satisfaction***

Scholars have considered psychological needs to be nutriments (Ryan, 1995), or conditions that are essential for a person's optimal psychological functioning (Deci and Ryan, 2000). We conceptualize these needs as fundamental psychological conditions that, when satisfied, enable entrepreneurs to function optimally and derive intrinsic motivation from their work experiences. Satisfaction is a function of entrepreneurs experiencing self-direction (autonomy), feeling capable of mastering challenges (competence), and perceiving belongingness with others (relatedness) in the workplace. The satisfaction of psychological

needs improves task persistence, job satisfaction, work attitudes, motivation, and overall psychological well-being (Gagné and Deci, 2005; Kirkley, 2016; Klyver *et al.*, 2020).

Reinforcing the role of basic need satisfaction at work for an individual's motivation (Deci *et al.*, 2001; Mudambi *et al.*, 2007), we assert that the entrepreneur's need satisfaction is conducive to heightened perceptions of the achievement of venture growth.

The need for autonomy reflects entrepreneurs' desire to experience a sense of volition and ownership over their work actions. This need is satisfied when they perceive freedom in making strategic and operational decisions without undue external control (Deci and Ryan, 2000, 2002; Vansteenkiste *et al.*, 2007). The need for competence refers to entrepreneurs' inherent desire to feel effective in their activities and experience mastery when facing work-related challenges. This need is satisfied when entrepreneurs perceive that they are successfully applying and expanding their skills to achieve desired outcomes (Ryan and Deci, 2000; Vansteenkiste *et al.*, 2007). The need for relatedness captures entrepreneurs' desire to forge meaningful, reciprocal connections with others in their work environment. Satisfaction of this need occurs when entrepreneurs perceive mutual trust, respect, and belonging with employees, partners, and other stakeholders (Van den Broeck *et al.*, 2010).

Having satisfied the core psychological needs, entrepreneurs are likely to aspire to even greater heights, believe even more in themselves, and further shape their beliefs about fruitful outcomes from their activities (Autio and Acs, 2010). In other words, entrepreneurs are more likely to internalize intrinsic motivation that translates into strong aspirations about their venture's success. Achieving venture growth becomes a natural process that does not require the forced integration of external pressures. Entrepreneurs gain satisfaction in their day-to-day management of activities (Hitt *et al.*, 2011) that are geared toward creating and exploiting opportunities in the marketplace. Indeed, facets of venture development (e.g., employment and growth of business contacts) can be viewed as nutrients at the venture level.

By activating their psychological nutrients, entrepreneurs achieve a sense of personal growth. What is more, they do not separate their own growth from that of the venture (Chaston and Sadler-Smith, 2011). Such a spillover effect occurs because entrepreneurs as key decision-makers and architects of their ventures imprint their psychological processes onto the organizational canvas. They project their own growth and well-being onto their ventures because psychological needs and venture expectations have connected intrinsic motivations. Within SMEs, where the entrepreneur's actions directly determine the firm's trajectory, the satisfaction of psychological needs is likely to be reflected in stronger confidence about the venture's growth potential.

When entrepreneurs experience the satisfaction of their need for autonomy, they are more likely to have ambitious growth expectations for their ventures. Autonomy empowers entrepreneurs to make strategic decisions independently (McMullen *et al.*, 2008), fostering a sense of ownership and accountability for the venture's growth trajectory. Similarly, entrepreneurs who feel competent are more likely to set higher growth expectations for their ventures, believing in their ability to navigate challenges and contribute to business success (Shir *et al.*, 2019). Satisfaction of the need for relatedness can contribute to a collaborative work environment, which is why entrepreneurs who feel connected in their ventures are expected to believe in achieving growth. They perceive a network of individuals contributing to and sharing in the venture's success (Cerasoli *et al.*, 2016). Thus, having satisfied their basic psychological needs, entrepreneurs achieve personal growth, and growth is expected at the venture level as well. The more autonomous, competent, and related to their ventures entrepreneurs feel, the more they will expect them to grow and thrive. Therefore:

**Hypothesis 1.** Entrepreneurial need satisfaction is positively related to venture growth beliefs.

Drawing again from SDT, the association between entrepreneurial activities and performance outcomes is a direct function of the degree to which such activities allow for the satisfaction of basic psychological needs at work. These needs must be met to promote optimal levels of individual well-being, effectiveness, and performance (Baard *et al.*, 2004; Gabriel *et al.*, 2014). Here, we argue that satisfaction of these needs drives proactive motivational processes that affect the venture's perceived financial performance (Ryan, 1995; Shepherd and Haynie, 2011); that is, the extent of satisfactory financial gains that entrepreneurial ventures derive from their operations (Katsikeas *et al.*, 2016; Ramaswami *et al.*, 2009), as perceived by entrepreneurs.

The ability to decide when, where, and how the job should be done (Thompson and Prottas, 2006) is likely to make the entrepreneur feel more autonomous and productive in, and in control of, the effective management of the venture's operations. Feeling that the need for competence has been satisfied—typically a result of skillful execution of and positive feedback in response to entrepreneurial behaviors (cf. Deci and Ryan, 2000)—provides another important condition for efficient functioning at work and satisfactory firm performance. Finally, an entrepreneur who feels connected to employees in the venture and to the venture itself (Jones *et al.*, 2007; Ravasi and Schultz, 2006), as well as to customers, suppliers, and other stakeholders, will have a clearer sense that what they do matters and to whom. These entrepreneurs are expected to perform more productively as a result.

Through the activation of psychological nutrients, entrepreneurs become driven by their own internal sentiments (Barrick *et al.*, 2013), resulting in enhanced diligence and productivity, improving entrepreneurs' perceived financial gains for their firms. Following SDT logic (Deci and Ryan, 2000; Gagné and Deci, 2005), it is posited that entrepreneurs, able to satisfy their psychological needs and experience improved well-being at work, are better equipped to proactively internalize extrinsic motivations. They become more naturally

drawn to, and welcoming of, monetary goals; those reflected in the perceived financial performance of their firm (cf. Haivas *et al.*, 2014). Entrepreneurs with satisfied psychological needs are also more content with how their firms are performing financially. In sum, satisfied psychological needs serve as nutriment that encourage personal acceptance of extrinsic financial motivations and boost entrepreneurial productivity in striving toward these goals, corresponding to superior perceived financial performance. Hence:

**Hypothesis 2.** Entrepreneurial need satisfaction is positively related to perceived financial performance.

### ***The role of entrepreneurial passion***

According to SDT, motivation encompasses the internal (intrinsic) and external (extrinsic) forces that drive individuals to initiate and sustain goal-directed behavior (Deci and Ryan, 1985). In other words, it can either be self-initiated or result from external inducements (Ranfagni and Runfola, 2018). In contrast, passion, often described as a powerful and enduring emotional connection to an activity, pursuit, or cause, is rooted in a profound sense of enjoyment and fulfillment (Vallerand *et al.*, 2003). Passion is ignited by the identification of activities aligning with one's values, interests, and identity (Vallerand *et al.*, 2003). While both passion and motivation are inherently linked to goal pursuit, passion is characterized by an emotional intensity that transcends mere goal attainment. Entrepreneurs may be motivated to engage in entrepreneurial activities due to intrinsic or extrinsic reasons, without being passionate about them (Pollack *et al.*, 2020). Yet, when entrepreneurs engage in tasks they are passionate about, their passion can strengthen motivation processes through the emotional intensity and enjoyment it evokes (Warnick *et al.*, 2018).

Previously, we attributed the link between satisfied psychological needs and venture growth beliefs to spillovers of intrinsic growth motivation from the entrepreneur to the venture (Deci and Ryan, 2000). Entrepreneurs' psychological states act as lenses through

which they envision the future trajectory of their firms. Importantly, harmonious passion is inherently linked to intrinsic motivation. This passion results from an autonomous internalization of the activity into the person's identity, suggesting that intrinsically motivated individuals freely accept the activity without any contingencies associated with it (Vallerand *et al.*, 2003) and engage in such activities for their own sake with a full sense of volition. As harmonious passion encourages entrepreneurs to engage in their work with joy, freedom, and a sense of personal endorsement (Forest *et al.*, 2011; Goss, 2008), it enables them to translate autonomy satisfaction into greater accountability for the venture's growth trajectory. Under high levels of harmonious passion, entrepreneurs can utilize the genuine and infectious confidence they have in their competency, nurturing resilient beliefs in achieving venture growth. They are likely to share their passion with others, allowing their use of meaningful connections to foster a work environment supportive of venture growth (Chen *et al.*, 2022).

Accordingly, entrepreneurial need satisfaction more easily translates into positive beliefs about venture growth, as the motivation rooted in harmonious passion creates a seamless link between the entrepreneur's personal values and the venture's potential. Because harmonious passion reflects autonomous internalization, it can strengthen the conversion of satisfied needs into adaptive cognitions such as venture growth beliefs. The intrinsic drive bolstered by the satisfaction of their psychological needs, empowers entrepreneurs to form strong, growth-oriented beliefs about their ventures. By contrast, when harmonious passion diminishes, the entrepreneur's connection to their work weakens, hindering the transfer of intrinsic motivation to the venture level and undermining growth beliefs. Therefore:

**Hypothesis 3a.** Harmonious passion positively affects the relationship of entrepreneurial need satisfaction with venture growth beliefs.

We argued above that psychological needs are linked to perceived financial performance due to extrinsic goals becoming internalized by, and important to, the

entrepreneur. Harmonious passion for one's work occupies a significant place in the person's identity and everyday life, but not an overwhelming one—it remains in harmony with other aspects of the individual's life (Murnieks *et al.*, 2020). Harmoniously passionate entrepreneurs can evaluate and regulate the conditions of their involvement through flexible problem-solving. As such, they are likely to understand how to use psychological need satisfaction to internalize monetary goals without damaging balance and persist in areas in which positive returns are expected (Mageau *et al.*, 2009). The alignment of psychological need satisfaction with harmonious passion allows for a sustained integration of personal values across all necessary entrepreneurial actions. This alignment would strengthen the disciplined pursuit of performance in resource-constrained SME environments, in particular.

When basic psychological needs are satisfied, individuals feel in control (autonomy), effective in their actions (competence), and connected to others (relatedness). The fulfillment of these needs supports the balanced mindset characteristic of harmonious passion (Shepherd *et al.*, 2023; Stephan, 2018), enabling entrepreneurs to foster self-determined engagement that translates motivational energy into deliberate decisions and efficient actions. The ability to make decisions in line with harmonious passion encourages entrepreneurs to optimize both their time and resources, positively influencing financial outcomes. Conversely, entrepreneurs with low harmonious passion tend to lack the ability to contextualize and evaluate circumstances related to their involvement in entrepreneurial tasks, resulting in a disconnection between psychological need satisfaction and business outcomes. Without this intrinsic motivation and the perseverance that it fosters, entrepreneurs would struggle to build on need satisfaction by identifying with extrinsic financial motives. Thus:

**Hypothesis 3b.** Harmonious passion positively affects the relationship of entrepreneurial need satisfaction with perceived financial performance.

This study proposes that the flow of intrinsic growth motivation that connects need satisfaction and venture growth beliefs is vulnerable to obsessive passion. A high level of obsessive passion denotes a forced internalization of entrepreneurial activities into the entrepreneur's identity and life, as external contingencies are brought to bear on the activity (e.g., the need for self-esteem in relation to one's peers) (Stroe *et al.*, 2018; Vallerand *et al.*, 2003). This controlled internalization and imposition of contingencies, disrupts self-regulation and weakens the translation of satisfied needs into venture growth beliefs. Although individuals typically like the activity when experiencing obsessive passion, they become dependent on it due to the contingencies that control them (Amiot *et al.*, 2006; Forest *et al.*, 2011). Entrepreneurs driven by obsessive passion become overly focused on external validation of their self-worth through their ventures. The obsessive drive toward a defensive dependency on meeting external contingencies constrains the entrepreneur's focus, reducing their ability to adopt a long-term vision for their venture's growth (De Mol *et al.*, 2016). Internalizing external behavioral regulations focuses entrepreneurs' attention narrowly; for instance, it limits their perspective of time. The lack of flexibility in thinking makes it harder for entrepreneurs with obsessive passion to leverage the satisfaction of their psychological needs, as their focus shifts toward external validation rather than strategic opportunities.

Entrepreneurs driven by obsessive passion become excessively focused on its pursuit, potentially neglecting the autonomy to make balanced decisions and engage in activities that align with their genuine interests and foster growth. Because obsessive passion leads entrepreneurs to engage in activities solely for external validation (Vallerand *et al.*, 2003), it is expected to compromise their ability to use a sense of competence to drive growth beliefs. Entrepreneurs excessively driven by obsession passion may also neglect social interactions, undermining attempts to use venture social dynamics to build a shared growth agenda (Ho and Pollack, 2014). Thus, obsessive passion intrudes on the satisfaction of basic

psychological needs and entrepreneurs might struggle to use need satisfaction to build and maintain a positive, growth-oriented mindset for the venture. However, when obsessive passion is low, it is easier for entrepreneurs to project their psychological needs onto their ventures; they have more time and greater freedom to process information and make choices. Entrepreneurs can see the bigger and longer-term picture regarding a growth trajectory of the entrepreneurial entity. As such:

**Hypothesis 4a.** Obsessive passion negatively affects the relationship of entrepreneurial need satisfaction with venture growth beliefs.

While harmoniously passionate entrepreneurs find themselves completely immersed in challenging and fascinating tasks, obsessively passionate entrepreneurs work long hours as they value the potential rewards earned from their ventures (Van den Broeck *et al.*, 2011). Yet obsessive and externally driven passion can lead to a distorted evaluation of the financial success of the venture and reduced contentment. When making strategic decisions, entrepreneurs marked by obsessive passion are likely to feel overwhelmed, ignore opposing lessons from past experiences, and persist in their line of thinking and action, even though decisions might undermine productivity and yield dysfunctional results (Pollack *et al.*, 2020).

With high levels of obsessive passion, the activity is doggedly pursued at any cost, often resulting in less-than-optimal functioning. In pursuing an obsessive passion, entrepreneurs may neglect their basic psychological needs (Vallerand *et al.*, 2003). This inflexible style of engagement in tasks works against the entrepreneur's psychological well-being and the nutrients of satisfied autonomy, competence, and relatedness needs (Nikolaev *et al.*, 2020). The stress and emotional exhaustion stemming from insufficiently activated psychological needs is expected to hinder the entrepreneur's cognitive functioning, decision-making, and overall efficiency, dampening financial performance. The debilitating effects of stress are likely to be pronounced in SMEs that lack organizational safeguards to buffer

founders from external validation pressures, overcommitment, and biased decision-making. Instead, low levels of obsessive passion allow entrepreneurs to manage their psychological needs more effectively, focusing their efforts on important activities that enhance financial performance without overwhelming themselves or their ventures. As a result, work can be better targeted toward the productivity of key activities that are conducive to satisfactory financial performance. Therefore:

**Hypothesis 4b.** Obsessive passion negatively affects the relationship of entrepreneurial need satisfaction with perceived financial performance.

### *The role of venture growth beliefs*

Entrepreneurship research suggests that individuals who believe in a venture and its potential are more motivated to exert the necessary effort and engage fully with the work (Lindblom *et al.*, 2020; Shepherd *et al.*, 2007). The efforts and engagement of entrepreneurs who back their own experience and abilities, are required to overcome uncertainty and make investment choices and operational decisions that drive financial performance (Efendic *et al.*, 2015). When entrepreneurs anticipate venture growth, they are more likely to pursue decisions that scale market opportunities and reinforce their firms' financial footing. (Neill *et al.*, 2016).

Projecting the health of entrepreneurial ventures onto financial performance is a natural part of the entrepreneurial process, to satisfy investors and other resource providers. Indeed, entrepreneurs who foresee continuing business growth will not hesitate to develop resources and capabilities to better enable their firms to pursue such opportunities (McMullen and Shepherd, 2006) and materialize the growth expectations (Storey, 2011; Szebb and Vörös, 2021). Optimistic entrepreneurs would be better able to secure scarce debt finance, which is often necessary to develop key intangible assets (e.g., knowledge) (Adomako *et al.*, 2015). Signals sent by confident and motivated entrepreneurs who believe in the positive outcomes of their ventures, through their decisions and actions (Lindblom *et al.*, 2020), may galvanize

the venture team in a way that drives financial performance (Chaganti *et al.*, 1995). There is reason to expect that leveraging optimism to secure resources and spur the team to achieve better performance is particularly effective in resource-constrained SMEs. Hence:

**Hypothesis 5.** Venture growth beliefs are positively related to perceived financial performance.

As previously posited, entrepreneurs who satisfy their core psychological needs experience personal growth, which naturally spills over into their ventures (Autio and Acs, 2010; Chaston and Sadler-Smith, 2011). In other words, these fulfilled needs collectively fuel venture growth beliefs. Further, strong venture growth beliefs directly influence entrepreneurial decisions and actions that shape perceived financial performance.

Entrepreneurs who hold strong growth beliefs are motivated to engage fully with their work, secure and utilize resources, and make decisions that enhance performance (Efendic *et al.*, 2015; Shepherd *et al.*, 2007). In sum, venture growth beliefs translate psychological need satisfaction into enhanced perceived financial performance. These beliefs mediate the relationship between entrepreneurial need satisfaction and perceived financial performance by serving as a psychological bridge between intrinsic motivation and tangible business outcomes. This mechanism is likely to be particularly salient for SMEs, where founders' beliefs and motivations strongly shape strategic direction, resource use, and growth orientation. Given their resource constraints and reliance on founder leadership, SMEs often depend more heavily on the entrepreneur's internal drivers to achieve financial outcomes.

Therefore:

**Hypothesis 6.** Venture growth beliefs mediate the relationship between entrepreneurial need satisfaction and perceived financial performance.

## **Method**

### ***Context, sampling procedure, and survey response***

The hypotheses are tested with data from Latvian entrepreneurs. A random sample of 1,500 SMEs was drawn from the Dun and Bradstreet commercial database using certain eligibility criteria: registered as commercial entities, with up to 250 employees (threshold consistent with the European Commission's definition of SMEs), and with established business operations for at least one year. Latvia, an ex-Eastern Bloc country that is now one of the European Union's north-eastern, fast-emerging markets, offers an interesting context for investigation. With a population of only 1.88 million, limited access to natural resources, and a modest GDP of U.S. \$43.52 billion (Euromonitor International, 2024; World Bank Group, 2024), Latvia relies extensively on entrepreneurial activity. The country has undergone major changes since the collapse of the Soviet Union, transitioning from being an isolated, centrally planned economy to one that is market- and knowledge-based and globally integrated.

SMEs and entrepreneurs have been pivotal forces in this transformation, representing the backbone of the Latvian economy with a vital role in national growth and employment. The Central Statistical Bureau of Latvia (CSB, 2024) reports that SMEs account for 99% of all registered enterprises, generate approximately 70% of total employment, and contribute around two-thirds of the country's GDP. Given their prominence, the motivation, behavior, and performance of SME entrepreneurs have a direct bearing not only on firm-level success but also on the broader economic and social development of Latvia.

SMEs face enduring challenges, such as limited financial and human resources, heightened environmental uncertainty, and strong dependence on the entrepreneur's personal initiative and emotional engagement. These constraints make the SME entrepreneur's psychological need satisfaction and passion critical for sustaining motivation, creativity, and resilience within high-performance ventures. Beyond firm-level outcomes, entrepreneurial

success in SMEs contributes to societal well-being by stimulating local economic resilience, job creation, community development, and inclusive growth (OECD, 2023). Examining entrepreneurial need satisfaction and passion among Latvian SMEs offers meaningful insights into the mechanisms that sustain economic vitality in fast-emerging market contexts. The need for research on SME entrepreneurship in emerging markets is evident (Chandra *et al.*, 2020; Sharma *et al.*, 2018), and Latvia as the geographical context for this study provides access to relevant and timely insights.

A tailored survey was developed with a structured questionnaire for the study (Dillman *et al.*, 2009). Entrepreneurs were initially contacted by telephone to assess their eligibility and request participation. Through an extensive online search and company verification, 1,134 eligible SMEs were identified from the original listing. A survey package was sent to each entrepreneur electronically and via post (with a prepaid return envelope), to maintain flexibility and increase participation. Collecting data in Latvia was a challenging task, due to a lack of reliable and updated firm databases, and inherent suspicion of research and surveys from Western countries. The cover letter explained the importance and objectives of the study, noted that the respondent had to be an entrepreneur,<sup>1</sup> and stated that the research was conducted under the guidance of an academic institution with anonymity and confidentiality.

The initial mailing and two subsequent reminders produced 284 responses, for a response rate of 25 percent. Next, 27 questionnaires were excluded for pre-test purposes. Then, a post-hoc test was performed for evaluating informant quality, assessing (on a seven-point scale) each respondent's (1) involvement in the firm's entrepreneurial activities, (2) knowledge of the firm's entrepreneurial activities, and (3) confidence in answering the survey questions (Kumar *et al.*, 1993; Spyropoulou *et al.*, 2018). Following this procedure, 2 further

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<sup>1</sup> Defined as founders or co-founders of the company with ownership and active involvement in its management (Lazar *et al.*, 2020).

questionnaires were eliminated as responses to one of these questions were lower than four (the midpoint), resulting in 255 usable responses with means ranging between 5.95 (for confidence) and 6.35 (for involvement), suggesting key informant competency in this study.

To limit potential common method bias (CMB), information was provided about the purpose of the study and multi-item measures were used in varied formats based on established scales that were carefully adapted to the research context (Chang *et al.*, 2010). Construct items were structured under general sections in the questionnaire to preclude respondents from identifying specific constructs' items or speculating about links between them. Further, a marker variable test was used to empirically assess CMB (Lindell and Whitney, 2001), wherein the second smallest correlation among the study constructs ( $r = 0.02$ ) served as an estimate to calculate CMB-adjusted correlations (Lindell and Whitney, 2001; Malhotra *et al.*, 2006). The results indicated no change in the pattern of correlations and their statistical significance, suggesting no threat from CMB to the validity of findings.

Of the participants, 141 (55.3%) were male and 114 (44.7%) female. On average, firm age was 8.58 years ( $SD = 5.61$ ), and entrepreneurs employed 20.49 employees ( $SD = 28.77$ ), had established 2.55 ventures ( $SD = 2.50$ ), exhibited international experience of 5.09 years ( $SD = 6.76$ ), and operated in 2.49 international markets ( $SD = 4.24$ ). Nearly 82% of the firms operated in service sectors (e.g., real estate, advertising, consulting, transportation, trade), and 18% in manufacturing industries (e.g., timber, textiles, furniture, metal construction).

### ***Measures***

The study constructs were measured using established multi-item scales adapted from the literature (*see Supplementary Table SI*). We used perceptual measures—typically achieving high correlations with objective measures (Arenius and Minniti, 2005; Singh *et al.*, 2016)—deemed appropriate for measuring attitudes, beliefs, and opinions of entrepreneurs, who often

act based on their perceptions and beliefs concerning company matters. We also assessed a set of control variables (see sample characteristics above) using standard measures.

The authors initially conducted in-depth interviews with 11 Latvian entrepreneurs to discuss the plausibility of the conceptual model and assess the structure and appearance of the questionnaire and the content and response formats of the measures (Katsikeas *et al.*, 2006). The questionnaire was then evaluated and revised based on in-depth discussions with five academics—serving as expert judges—in the areas of entrepreneurship and management, where all judges rated each item as ‘highly representative’ or ‘representative’ of the construct under examination (Zaichkowsky, 1985). Next, the questionnaire, developed in English, was translated into Latvian by a professional translation bureau and then back translated and checked for idiomatic equivalency with the original in English. The final version of the questionnaire was formally pretested with 27 entrepreneurs. No problems were detected.

## **Analysis and Results**

### ***Measure validation***

Confirmatory factor analysis (CFA) using EQS software was employed to assess the validity of the construct measures and estimate two measurement models (Anderson and Gerbing, 1988). One model captured all first-order constructs: venture growth beliefs, financial performance, and harmonious and obsessive passion. In line with prior research, the current work conceptualized the entrepreneurial needs construct as a second-order construct composed of three first-order factors: need for autonomy, need for competence, and need for relatedness (e.g., Baard *et al.*, 2004; Deci *et al.*, 2001; Gagné, 2003); thus, we ran another CFA model to test this construct’s multidimensional nature.

In both models, we used the elliptical reweighted least squares estimation procedure, where each item was restricted to load on its a priori specified factor and, by default, all

underlying factors were allowed to correlate with one another (Gerbing and Anderson, 1988). Both the first-order ( $\chi^2_{(24)} = 41.88, p = 0.014$ ; CFI = 0.97, NNFI = 0.96, RMSEA = 0.06, and AOSR = 0.05) and second-order ( $\chi^2_{(71)} = 151.97, p = 0.000$ ; CFI = 0.97, NNFI = 0.96, RMSEA = 0.06, and AOSR = 0.05) factor CFA models indicated good fit statistics. All factor loadings were high and significant ( $p = 0.01$ ), suggesting convergent validity (*Supplementary Table SI*). The average variance extracted (AVE) of all constructs was greater than 0.50, satisfying the recommended threshold (Bagozzi and Yi, 1988, 2012). In all cases, the squared correlation between two constructs ( $\phi^2$ ) was less than the AVE scores of the two constructs (Fornell and Larcker, 1981), indicating discriminant validity (*Supplementary Table SII*). All measurement scales also exhibited acceptable reliability, with alpha and composite reliability scores exceeding the thresholds of 0.7 and 0.6, respectively (*Supplementary Table SII*).

### ***Test of hypotheses***

#### *Main effects*

Due to the possibility of omitted variables (i.e., additional factors that affect venture growth beliefs and perceived financial performance), consideration is given to any endogeneity presence pertaining to the complex antecedent influences of entrepreneurial need satisfaction. To this end, we use the instrumental variables approach, which involves a two-stage least squares (2SLS) regression, to mitigate such concerns (Bascle, 2008; Hill *et al.*, 2021). In the first stage, need satisfaction, the endogenous variable, is regressed on the chosen instruments,<sup>2</sup> which are used as predictors, and the regression residual is saved in lieu of that variable. This regression model yielded an adjusted  $R^2$  of 0.62, which indicates the relevance

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<sup>2</sup> New product development, engagement, and commitment were deemed suitable to be treated as instrumental variables (Bascle, 2008; Wooldridge, 2002), as each of these significantly affected entrepreneurial need satisfaction ( $p < 0.05$  for all instruments) but was not linked to venture growth beliefs and financial performance based on the correlation analysis (the analysis returned nonsignificant correlations with venture growth beliefs and financial performance:  $r = 0.012$  and  $r = 0.002$ , respectively, for new product development,  $r = 0.118$  and  $r = 0.008$  for engagement, and  $r = 0.126$  and  $r = 0.125$  for commitment).

and importance of the instruments used in this research. In the second stage, the residual saved from the first regression is used as indicator of the entrepreneurial needs construct for hypothesis testing purposes (for discussion, see Li and Zahra, 2012).

Having controlled for this source of endogeneity, the authors performed hierarchical multiple regression analysis (second stage of the 2SLS technique) to test the hypotheses. The results appear in Table I. The evidence suggests that there is a strong positive association between entrepreneurial need satisfaction and venture growth beliefs ( $b = 0.25, t = 2.02, p = 0.027$ ), in support of Hypothesis 1. Contrary to expectations, entrepreneurial need satisfaction has no association with perceived financial performance ( $b = 0.10, t = 0.66, p = 0.656$ ), lending no support for Hypothesis 2. Venture growth beliefs are positively related to perceived financial performance ( $b = 0.57, t = 4.98, p = 0.000$ ), supporting Hypothesis 5.

**Table I here**

*Moderation effects*

The study followed Ping's (1995) approach for calculating the interaction terms used in the regression models. The results indicate that the interaction effect of harmonious passion and entrepreneurial need satisfaction on venture growth beliefs is positive ( $b = 0.33, t = 2.98, p = 0.015$ ), in support of Hypothesis 3a. This effect is plotted in Figure 2. Split-group, median-based analysis demonstrates that for low levels of harmonious passion, entrepreneurial need satisfaction is not significantly related to venture growth beliefs ( $b = 0.04, t = 0.11, p = 0.212$ ), whereas for high levels of harmonious passion, entrepreneurial need satisfaction is positively related to venture growth beliefs ( $b = 0.46, t = 3.41, p = 0.05$ ). The steeper slope observed at high levels of harmonious passion, in Figure 2, reflects a meaningful amplification of the relationship between need satisfaction and venture growth beliefs. Regarding the role of harmonious passion in conditioning the link of entrepreneurial need

satisfaction and perceived financial performance, the results reveal no significant interaction effect ( $b = 0.11, t = 1.16, p = 0.483$ ). Thus, Hypothesis 3b is not supported.

### Figure 2 here

Concerning the moderating role of obsessive passion, the results show no significant interaction effect of obsessive passion and entrepreneurial need satisfaction on venture growth beliefs ( $b = 0.04, t = 0.41, p = 0.195$ ), contrary to Hypothesis 4a. However, the evidence suggests a negative interaction effect of obsessive passion and entrepreneurial need satisfaction on perceived financial performance ( $b = -0.43, t = -4.54, p = 0.018$ ), supporting Hypothesis 4b (see Figure 3). Here, split-group analysis indicates that the entrepreneurial need satisfaction–perceived financial performance link is positive at low levels of obsessive passion ( $b = 0.53, t = 4.22, p = 0.024$ ), but nonsignificant at high levels of such passion ( $b = -0.11, t = -0.37, p = 0.665$ ). The pronounced difference in slopes across levels of obsessive passion, in Figure 3, indicates a strong dampening effect on the need satisfaction–performance relationship.

Beyond statistical significance, the magnitude of the effects is practically meaningful. While the control variables alone account for 12% of the variance in venture growth beliefs (Model I), adding entrepreneurial need satisfaction and the two types of passion increases the explained variance to 21% (Model II), indicating meaningful incremental explanatory power ( $\Delta R^2 = 0.09$ ). Importantly, subsequent inclusion of the interaction terms boosts the explained variance to 38% (Model III;  $\Delta R^2 = 0.17$ ), suggesting that the regulatory quality of passion plays a substantively important role in shaping entrepreneurs' growth beliefs.

A similar pattern emerges for perceived financial performance, where the control variables explain very little variance on their own ( $R^2 = 0.02$ ; Model IV). The inclusion of venture growth beliefs, entrepreneurial need satisfaction, and the two types of passion, leads to a pronounced increase in explanatory power ( $R^2 = 0.40$ ; Model V), corresponding to a

substantial gain in explained variance ( $\Delta R^2 = 0.38$ ). This indicates that cognitive and motivational variables account for a large share of performance perceptions in SMEs, where standardized coefficient for venture growth beliefs on perceived financial performance ( $b = 0.55$ ) indicates a particularly strong effect, underscoring its central role in shaping the perceptions of financial outcomes in SMEs beyond entrepreneurial need satisfaction. The addition of interaction terms further increases the explained variance to 42% (Model VI), suggesting that passion meaningfully conditions how need satisfaction translates into perceived financial outcomes.

### Figure 3 here

#### *Mediation effects*

To examine whether venture growth beliefs mediate the relationship between entrepreneurial need satisfaction and perceived financial performance, a mediation analysis was conducted. We implemented Baron and Kenny's (1986) framework using EQS, in line with statistical practices in past research (Bello *et al.*, 2010; Wei *et al.*, 2013). To achieve this, we employed a bootstrap estimation method with 1,000 samples, using 95<sup>th</sup> percentile bias-corrected confidence intervals. The SEM mediation analysis generated standardized coefficients and significance tests for the total effect, direct effect (non-mediated), and indirect effect (mediated). Full mediation exists if need satisfaction itself has a significant effect on financial performance, but this effect becomes nonsignificant with the addition of venture growth beliefs to the model (Robson *et al.*, 2008).<sup>3</sup>

A first, direct effects model was tested to assess if entrepreneurial need satisfaction predicts perceived financial performance. A second model assessed whether need satisfaction

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<sup>3</sup> Partial mediation is supported if the effect of need satisfaction declines, but remains significant, with the addition of venture growth beliefs (Baron and Kenny, 1986).

predicts venture growth beliefs. A third model examined whether growth beliefs predict financial performance, while controlling for need satisfaction. A full mediation model was then estimated to test whether the direct effect of entrepreneurial need satisfaction on perceived financial performance diminishes or becomes nonsignificant when venture growth beliefs are included as a mediator. Table II presents our mediation results with excellent full mediation model fit. We find that the effect of entrepreneurial need satisfaction on perceived financial performance ( $b = 0.15, t = 2.40, p = 0.000$ ) becomes nonsignificant ( $b = 0.03, t = 0.14, p = 0.213$ ) when venture growth beliefs are also linked to financial performance in the model. Thus, the results suggest that venture growth beliefs fully mediate the link between entrepreneurial need satisfaction and financial performance, in support of Hypothesis 6. The size of the indirect effect further suggests that a considerable portion of the influence of entrepreneurial need satisfaction on perceived financial performance operates through venture growth beliefs, highlighting the practical importance of this cognitive mechanism. In sum, our mediation findings suggest that the influence of entrepreneurial need satisfaction on perceived financial performance is primarily channeled through entrepreneurs' beliefs in their venture's growth prospects.

### **Table II here**

#### *Post-hoc moderated mediation analysis*

To further clarify how the interaction between moderating and mediating variables may influence the relationship between entrepreneurial need satisfaction and perceived financial performance, moderated mediation models were tested for each type of entrepreneurial passion. The first model was tested using the PROCESS macro model number 7 (Hayes, 2013), whereby harmonious passion was found to positively moderate the effect of entrepreneurial need satisfaction on venture growth beliefs ( $b = 0.28, t = 2.07, p = 0.039$ ). Venture growth beliefs were associated with better perceived financial performance ( $b =$

0.66,  $t = 10.34$ ,  $p = 0.000$ ). The overall, moderated mediation model was supported (index = 0.18; 95% CI = 0.02; 0.34). The absence of zero within the CI indicates a significant moderating effect of harmonious passion on the entrepreneurial need satisfaction and perceived financial performance link via venture growth beliefs. The conditional indirect effect was strongest in those high in harmonious passion (1 SD above the mean; effect = 0.42, SE = 0.19, 95% CI = 0.03; 0.78) and nonsignificant in those low in harmonious passion (1 SD below the mean; effect = - 0.01, SE = 0.12, 95% CI = - 0.25; 0.22). Thus, harmonious passion moderates the mediating effect of venture growth beliefs in the link between entrepreneurial need satisfaction and perceived financial performance such that the effect is stronger when harmonious passion is high rather than low.

The second model was tested using the PROCESS macro model number 5 (Hayes, 2013), whereby obsessive passion was found to negatively moderate the effect of entrepreneurial need satisfaction on perceived financial performance ( $b = - 0.31$ ,  $t = - 3.56$ ,  $p = 0.000$ ). Venture growth beliefs were associated with better perceived financial performance ( $b = 0.66$ ,  $t = 11.01$ ,  $p = 0.000$ ). The overall moderated mediation model was supported (index = 0.27; 95% CI = 0.02; 0.54). As zero is not within the CI, this indicates a significant moderating effect of obsessive passion on the entrepreneurial need satisfaction and perceived financial performance link via venture growth beliefs. The conditional indirect effect was strongest in those high in obsessive passion (1 SD above the mean; effect = - 0.50, SE = 0.22, 95% CI = - 0.93; - 0.06) and reversed (positive) in those low in obsessive passion (1 SD below the mean; effect = 0.48, SE = 0.19, 95% CI = 0.10; 0.86). Therefore, obsessive passion moderates the mediating effect of venture growth beliefs on the relationship between entrepreneurial need satisfaction and perceived financial performance such that the effect is weaker when the level of obsessive passion is high rather than low.

## **Robustness Checks<sup>4</sup>**

### ***Reverse causality tests***

While no research design can completely rule out reverse causality and possible alternative explanations, we tried to account for these issues in several ways. In addition to controlling for endogeneity as discussed above, we addressed the potential concern of reverse causality by running several alternative causal models in EQS and checking their fit statistics. In contrast to our conceptual framing (Figure 1), it could be argued that financial performance has a positive impact on entrepreneurial need satisfaction or venture growth beliefs, while positive venture growth beliefs could improve entrepreneurial need satisfaction. Thus, we ran three alternative structural models (*see Supplementary Table SIII*) and assessed these alternative causal orderings based on fit statistics. All the alternative models yielded weaker fit indices when compared to the base model deployed for testing our hypotheses. In sum, the results suggest that reverse causation does not appear to be an issue of concern in this research, thus enhancing confidence in our conceptualization and empirical findings.

### ***External validity checks: replication study***

The external validity of our findings was assessed using a sample of 205 entrepreneurial ventures in Russia, which spans the European Union's north-eastern fringe. Although Russia and Latvia are adjacent countries, they are different in terms of history and culture, as well as in terms of population (i.e., 144.4 million in Russia vis-a-vis 1.88 million in Latvia) and GDP (i.e., U.S. \$2.21 trillion in Russia and U.S. \$38.68 billion in Latvia) (Euromonitor International, 2022; Statista, 2022). Both Russia and Latvia exhibit high levels of

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<sup>4</sup> In addition to the robustness checks outlined in this section, we explored if perceived uncertainty interferes with the development of positive venture growth beliefs and perceived financial performance, even for entrepreneurs whose psychological needs are satisfied. Specifically, we ran additional regressions with market turbulence included as a control variable. This serves as a proxy for external risk and uncertainty. The results of all hypothesized associations remained consistent, both in the main study and the replication study, further validating our research framework. We thank an anonymous reviewer for encouraging this check.

entrepreneurial activity (approximately 6% and 14%, respectively) (Global Entrepreneurship Monitor, 2022).

Russian data collection and measure validation procedures were similar to those followed for Latvia. To assess whether the Russian and Latvian entrepreneurs in the two samples interpreted the questionnaire scales equivalently, we ran measurement invariance tests (Steenkamp and Baumgartner, 1998). The results demonstrated that the scales exhibited full metric invariance across the two country samples (*see Supplementary Table SIV*). Importantly, in the Russian sample all the hypothesized links in the proposed model are supported at  $p < 0.05$ , apart from Hypothesis 1 (supported at  $p < 0.10$ ),<sup>5</sup> enhancing confidence in and offering support for the external validity of our findings (*see Supplementary Table SV*). In other words, our conceptual framework is also applicable to the entrepreneurial context of a much larger emerging market.

## **Discussion**

Overall, our research enhances understanding of psychological need satisfaction in SDT (Deci and Ryan, 2000) and its interplay with the dualistic model of passion (Vallerand *et al.*, 2003) in shaping entrepreneurial outcomes. We identify venture growth beliefs as a critical mediator in the relationship of psychological need satisfaction with performance, shedding light on the cognitive processes through which need satisfaction impacts venture success. Our results also support a regulatory-quality view of entrepreneurial passion: harmonious passion amplifies the benefits of need satisfaction, while obsessive passion can undermine them. The way in which passion is internalized shapes how need satisfaction translates into growth

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<sup>5</sup> The result pertaining to Hypothesis 1, statistically significant at  $p = 0.081$ , may be considered acceptable due in part to the smaller sample of the replication study. It is likely that with sample size increases, the strength of this effect would also increase. By relaxing the threshold to  $p < 0.10$ , the study reduces the risk of Type II errors and increases the likelihood of detecting weaker but important effects. This approach ensures a balance between identifying meaningful patterns and maintaining scientific rigor, which is suitable for replication purposes (e.g., Aparicio *et al.*, 2023; Cetindamar *et al.*, 2012; Espiritu-Olmos and Sastre-Castillo, 2015).

beliefs and performance. The findings are meaningful for SMEs, where the entrepreneur's psychological functioning can affect the venture's outcomes. The strong links among need satisfaction, passion, and growth beliefs highlight how founder-driven motivation operates as a key engine of success in resource-constrained firms. Indeed, the large increases in explained variance across growth beliefs and financial performance in our regression models underline the practical relevance of motivational spillovers in driving SME-level outcomes.

The comparative design involving Latvian and Russian entrepreneurs was intended to explore how motivational mechanisms unfold in distinct emerging-market contexts. While Latvia represents a smaller, more open, and institutionally mature transition economy, Russia has a larger and more complex market environment. We revealed consistent patterns across both samples, indicating that the links among need satisfaction, passion, venture growth beliefs, and perceived performance hold across market scales. The underlying psychological processes proposed by SDT and passion's dualistic model may thus be robust across differing institutional and resource conditions. Specifically, we find that entrepreneurial optimal functioning achieved through satisfied psychological needs (Van den Broeck *et al.*, 2016) projects on to the venture level, increasing its chances for success. Having activated their psychological nutrients, garnered from the satisfaction of basic psychological needs, entrepreneurs achieve a sense of personal growth. They project this psychological growth onto their ventures through interconnected intrinsic motivations (Vansteenkiste *et al.*, 2007). Satisfied entrepreneurs aspire for more, believe in themselves, and are motivated to act entrepreneurially (Mudambi *et al.*, 2007), resulting in the formation of positive venture growth beliefs. Due to this spillover effect, satisfied entrepreneurs hold optimistic beliefs about their ventures and report more favorable assessments of financial performance.

While these findings point to a clear motivational mechanism linking need satisfaction, venture growth beliefs, and perceived performance, they also suggest that this process does

not operate uniformly across entrepreneurs. Instead, the extent to which psychological need satisfaction translates into favorable venture beliefs and outcomes depends on how entrepreneurial motivation is regulated. Our work demonstrates that this process is contingent upon the passion of entrepreneurs. We observe that harmonious passion boosts the impact of need satisfaction on venture growth beliefs, while obsessive passion reduces need satisfaction's positive effect on financial performance. When entrepreneurs are harmoniously passionate, the nutrients derived from psychological need satisfaction (Mageau *et al.*, 2009) lead to more positive and stronger beliefs in the growth of their ventures. Conversely, obsessive passion causes a shift in entrepreneurs' perceptions of financial performance (Pollack *et al.*, 2020; Walsh and Cunningham, 2024) and devalues their ventures' success. This distinction between harmonious and obsessive passion is even more critical among SMEs, underscoring that the quality of passion—whether harmonious or obsessive—matters greatly for strategic and financial outcomes (Wu *et al.*, 2025). As small firms essentially rely on the entrepreneur's direct engagement and emotional commitment, harmonious passion can sustain innovation and adaptability, whereas obsessive passion may amplify stress and impair judgment under uncertain conditions.

However, the weaker effects observed in some links may reflect that Latvian SMEs operate under resource constraints, limited access to external finance, and volatile market conditions (OECD, 2023). In such conditions, even strong psychological drivers like need satisfaction may not always translate into financial gains, as contextual barriers can dampen or delay performance outcomes. Compared with larger firms or SMEs in more mature economies, Latvian entrepreneurs may face tighter margins for transforming motivation into financial success, which could explain our nonsignificant findings (e.g., for Hypothesis 2).

### ***Theoretical implications***

The findings have multiple theoretical implications. First, while scholars have predominantly looked at the importance of need satisfaction for the general well-being outcomes of entrepreneurs (Shir and Ryff, 2022; Stephan, 2018), our study advances this body of knowledge on SDT by also considering the role of need satisfaction in shaping venture outcomes (Gagné and Deci, 2005; Van den Broeck *et al.*, 2016). Our research demonstrates how the satisfaction of basic psychological needs affects venture-level outcomes, including growth beliefs and financial performance (Gagné and Deci, 2005; Van den Broeck *et al.*, 2016). Positioning this analysis in the SME domain extends existing theory by showing how motivational mechanisms operate under structural and resource constraints. In SMEs, where the personal agency of an individual substitutes for formalized systems, the entrepreneur's psychological need satisfaction becomes an essential driver of performance and resilience.

Specifically, we further advance the application of SDT in entrepreneurship research by revealing that entrepreneurs who experience autonomy, competence, and relatedness are intrinsically motivated to project their personal growth onto their ventures, fostering optimistic growth beliefs and performance outcomes (Murnieks *et al.*, 2019). The alignment of psychological satisfaction with motivation creates a synergistic effect (Murnieks *et al.*, 2019), enhancing entrepreneurs' hard work, attention to the decisions they make, and the risks they take for their ventures. We offer new evidence that autonomous and competent entrepreneurs with strong ties, motivated by the sense of their need satisfaction, are likely to be optimistic and empowered to achieve more for their ventures. Connecting need satisfaction to financial performance through venture growth beliefs implies that the impact of fulfilling such needs on how entrepreneurs view such performance is intricately tied to their confidence and expectations regarding the growth of their ventures. By identifying venture growth beliefs as a mediating mechanism, this study contributes to research on entrepreneurial cognition by showing how motivational states are cognitively transformed

into venture-level performance assessments (Autio and Acs, 2010; Shepherd *et al.*, 2007). In highlighting a beliefs-based pathway that links psychological need satisfaction to perceived financial performance (Van den Broeck *et al.*, 2016), we help bridge motivation-focused and cognition-focused perspectives in entrepreneurship—demonstrating that entrepreneurs’ beliefs about venture growth serve as a critical lens through which motivation is connected to performance evaluations in SMEs (Lindblom *et al.*, 2020; Efendic *et al.*, 2015).

Second, given the limited empirical study of contingencies that can help understand the nature of need satisfaction and its outcomes (Cerasoli *et al.*, 2016), we contribute to the growing debate on the significance of passion in entrepreneurship (e.g., Zhao and Liu, 2023; Chen *et al.*, 2022; Newman *et al.*, 2021) by also exploring how passion strengthens or weakens relationships of entrepreneurial need satisfaction with important venture outcomes. In doing so, we extend the current body of knowledge on the critical role that dualistic passion (Vallerand *et al.*, 2003) plays in conditioning the links between need satisfaction and venture growth beliefs and performance. Specifically, our results imply that high harmonious passion encourages entrepreneurs to engage in their work with joy and a sense of personal endorsement (Forest *et al.*, 2011), maintain a real interest in their activities, and thus boost the link between the activated psychological nutrients and their resulting venture beliefs. But, this is not the case for the link between need satisfaction and financial performance, potentially as harmonious passion exhibits its effects more by motivating entrepreneurs intrinsically rather than extrinsically.

On the other hand, obsessive passion tends to narrow entrepreneurial focus on external validation and immediate outcomes, rather than fostering long-term strategic thinking, which could prevent entrepreneurs from integrating their need satisfaction into the development of growth-oriented beliefs about their ventures. At the same time, high psychological need satisfaction among obsessively passionate entrepreneurs makes them more critical and

demanding (Pollack *et al.*, 2020) regarding financial performance, creating a distorted perception of their ventures' achievements. The logic is that such entrepreneurs feel internal pressures and experience external contingencies that encourage their engagement in entrepreneurial activities (Forest *et al.*, 2011; Stroe *et al.*, 2018). They are compelled, rather than motivated, to act entrepreneurially. This obligation and unyielding pursuit of perfection hinders satisfaction with already achieved financial results (De Mol *et al.*, 2016).

Further, following the results of our post-hoc analyses, we confirm that harmonious passion (positively) and obsessive passion (negatively) moderate the influences of venture growth beliefs on the link between entrepreneurial need satisfaction and perceived financial performance. In sum, our study adds to the theoretical scope of research on the passion of entrepreneurs by integrating SDT (Deci and Ryan, 2000) and passion's dualistic model (Vallerand *et al.*, 2003). The theoretical integration extends existing research by highlighting the synergistic effects of need satisfaction and harmonious passion in driving entrepreneurial success while acknowledging the potential pitfalls of obsessive passion. It underscores the importance of fostering conditions that satisfy basic psychological needs and promote harmonious, rather than obsessive, passion to enhance venture-level outcomes.

### ***Managerial Implications***

This research offers several practical implications. For SME entrepreneurs, the results underscore that the firm's vitality depends on their own motivational health and emotional regulation. Entrepreneurs often prioritize venture success over their own well-being, which can result in negative outcomes not only for themselves but also for their ventures. This is particularly relevant to SMEs, where excessive emotional involvement or obsessive passion can quickly destabilize small teams, strain limited resources, and hinder adaptive decision-making. It is important that entrepreneurs appreciate the level of their need satisfaction at

work and the importance of resulting growth beliefs. Cultivating positive beliefs about their business can be done by celebrating small wins and progress. This can create a feedback loop, where positive growth beliefs fuel entrepreneurial motivation and efforts. Entrepreneurs should periodically assess how they feel in daily entrepreneurial activities, take breaks where possible, and attempt to satisfy their basic psychological needs by creating an environment supportive of psychological need satisfaction. First, this can be achieved by purposefully acting more independently, encouraging personal decision-making in their entrepreneurial activities, avoiding micromanaging their teams, and focusing on pursuing initiatives that align with their intrinsic motivations. Second, building their skill and knowledge through continuous learning, as well as through seeking feedback, can strengthen competence. Third, forming meaningful connections with the venture staff, mentors, and customers, and other like-minded entrepreneurs, can create a supportive network and boost relatedness.

An awareness of the satisfaction of entrepreneurial needs can be motivating and empowering, enabling entrepreneurs to gain a deeper understanding of how they take part in daily entrepreneurial activities and perceive the future of the business. If entrepreneurs do not maintain sufficient entrepreneurial need satisfaction, it is likely to negatively affect their beliefs about the venture's growth potential, thus reducing their ability to transform promising opportunities into profitable outcomes. This observed main link can help entrepreneurs reflect on whether their need satisfaction is high enough to productively make work-related decisions, act upon identified opportunities, and expand their business horizons.

The findings underscore the key role of passion in shaping entrepreneurial behaviors and venture success. Entrepreneurs need to leverage their harmonious passion to create a sustainable business environment that supports both personal well-being and venture growth. Thus, existing and aspiring entrepreneurs should be encouraged to identify and embrace their passion in a harmonious way when creating environments supporting their autonomy,

competence, and relatedness, as this will strengthen the link between need satisfaction and growth-oriented beliefs. Entrepreneurs should prioritize cultivating a balanced and intrinsic passion for their ventures, focusing on personal fulfillment and long-term goals rather than solely on external validation. By fostering harmonious passion, they can enhance their ability to leverage need satisfaction, leading to more adaptive growth beliefs, better strategic decision-making, and more balanced evaluations of venture success. However, entrepreneurs should avoid obsessively measuring their success purely in financial terms and instead focus on value creation and customer satisfaction. Further, entrepreneurs should not succumb to obsessive passion when their entrepreneurial needs are satisfied, as this can have adverse financial implications. Ensuring that passion doesn't become obsessive requires a healthy balance between work and personal life. Taking time to recharge and focus on other fulfilling activities can support psychological well-being and promote better decision-making. For obsessively passionate entrepreneurs, addressing feelings of internal pressures by adopting mindfulness practices or stress-management techniques can be beneficial. This will help ensure that their motivation stems from personal growth rather than external expectations.

From a policy perspective, the findings are relevant not only for the Latvian SME sector but also for comparable small, emerging-market economies. Given the tighter financial margins and limited resources faced by Latvian entrepreneurs, policymakers and support institutions should focus on reducing the structural barriers that prevent psychological motivation from translating into financial outcomes. Such interventions can include access to micro-financing, simplified regulatory procedures, and funded advisory services among others, and may help entrepreneurs convert strong growth beliefs and motivation into tangible performance. Public support programs aimed at enhancing managerial competence, strategic planning, and even stress management could also be valuable in mitigating the negative consequences of obsessive passion under resource scarcity. By strengthening the institutional

support for SME entrepreneurs, policymakers can improve the performance returns of entrepreneurial motivation rather than relying solely on entrepreneurial resilience.

Additionally, educators should find it prudent to incorporate the concept of passion in relevant entrepreneurship training, thus assisting entrepreneurs to discover their harmonious passion and the facets of a particular venture that would help them be more passionate and motivated yet balanced in their entrepreneurial efforts. For instance, teaching entrepreneurs how to find intrinsic value in their ventures, rather than solely encouraging external rewards or competition, is likely to be beneficial. For harmonious passion, this means helping them identify personal meaning and fulfillment in their entrepreneurial journey, adopting a long-term growth perspective over immediate success. Educators can also provide entrepreneurs with tools for emotional regulation and stress management as this can help prevent obsessive passion, which can stem from an inability to balance passion with other aspects of life.

### ***Limitations and Future Research***

This study is not without limitations and these need to be acknowledged. First, measures employed in the study were of a self-reported, subjective nature. However, the key point was to identify how entrepreneurs evaluate their passion and satisfaction and how well they believe the firm is operating in relation to the selected criteria. The measures adopted were deemed suitable for the purpose of this study (Arenius and Minniti, 2005; Singh *et al.*, 2016). While the perceptual measures used in this study are appropriate for capturing entrepreneurs' beliefs and motivational states, future research could deploy a multi-source approach for data to complement these with objective indicators (e.g., archival financial data) or data from additional informants to minimize common method bias and extend the scope of inquiry.

Second, the cross-sectional nature of the research design precludes the ability to make causal inferences. The full effects of entrepreneurial need satisfaction might require time to

unfold (Lévesque and Stephan, 2020), and second time-point data would have helped in examining this. Similarly, the effects of passion might change over time (Murnieks *et al.*, 2014). However, obtaining longitudinal data was deemed not feasible within the constraints of this research project, due to difficulties in collecting such primary data in Latvia from busy entrepreneurs. Future research would benefit from the use of longitudinal designs, in different market settings (e.g., emerging and developed economies), to study how passionate entrepreneurs' satisfaction with entrepreneurial needs at work shapes venture expectations and performance over time. Future studies could also strengthen methodological rigor by taking additional robustness checks (e.g., effect size estimates, predictive relevance measures), particularly when longitudinal or multi-source research designs are employed.

Third, our study focused on the boundary condition effects of harmonious and obsessive forms of passion, and these may be different depending on the development stage of the entrepreneurial venture or experience. While prior research suggests entrepreneurial experience may shape how individuals interpret and respond to motivational states (Laskovaia *et al.*, 2020), experience was not incorporated as a focal construct into the present study. We partially captured experience through background indicators such as the number of ventures entrepreneurs had established and the years of their international involvement. These reflect accumulated exposure to venture creation and cross-border operations, but do not fully tap entrepreneurs' day-to-day experiential learning and routine engagement in entrepreneurial work. Future research could extend our framework by explicitly examining experiential depth in everyday entrepreneurial practice as a boundary condition of how psychological need satisfaction and passion convert into venture growth beliefs and performance outcomes.

Additionally, future research could explore passion content domain perspectives (Cardon *et al.*, 2013) to investigate how different forms of passion (for inventing, founding, and developing) influence cognition and performance. At the same time, future work could

integrate dualistic and domain-based views to better capture the multi-faceted, situated nature of entrepreneurial passion and its cognitive and behavioral effects (Moeller, 2025).

Longitudinal and cross-country studies could also examine shifts between harmonious and obsessive passion over venture stages, and extend outcomes beyond financial performance to innovation, growth, and societal well-being. In line with acknowledging the importance of individual characteristics of entrepreneurs in our study, some other attributes of entrepreneurs could be investigated in future empirical work on passion. Traits such as resilience, regulatory focus, or cognitive flexibility may help explain how entrepreneurs respond to need satisfaction and shape venture outcomes over time. Finally, it would be enlightening if future empirical inquiry investigates the role of other factors, such as engagement (Shir *et al.*, 2019) and alertness (Tang *et al.*, 2012), in potentially influencing the links among entrepreneurial need satisfaction, venture growth beliefs, and financial performance.

### ***Conclusion***

This research integrates self-determination theory (Deci and Ryan, 2000) and the dualistic model of passion (Vallerand *et al.*, 2003), within the SME context, to advance understanding of the psychological mechanisms that shape entrepreneurial outcomes. By identifying venture growth beliefs as a key mediator between entrepreneurial need satisfaction and perceived financial performance, the study highlights how entrepreneurs' fulfilled needs for autonomy, competence, and relatedness are associated with optimistic growth beliefs and more favorable venture outcomes. Moreover, the findings underscore the dual role of passion, showing that harmonious passion amplifies the positive effects of need satisfaction, while obsessive passion may undermine them. Collectively, these insights provide an integrated view of how motivational and emotional factors interact to influence entrepreneurial success by

emphasizing the importance of fostering conditions that satisfy basic psychological needs and encourage balanced, harmonious passion to sustain personal fulfillment and venture growth.

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